

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 669

Port of Vancouver, B.C. Date of First Survey 22 Aug 1918 Date of Last Survey Oct 10 1918 No. of Visits 9  
No. in on the Wood Iron or Steel Single screw St. War skuna Port belonging to Victoria B.C.  
Reg. Book 1st Entry Built at Victoria, B.C. By whom Cameron Genoa Mills Slipp When built 1918  
Owners Easton Guig & Co. Owners' Address Glasgow.  
Yard No. 9. Electric Light Installation fitted by W. H. Haver When fitted 1918

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

16 H. P. DeLaval Steam Turbo-Generator  
(Generator by General Electric Co., Ltd.)

Capacity of Dynamo 90 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine room (Lower platform) Whether single or double wire system is used double

Position of Main Switch Board Engine room near dynamo having switches to groups 6 Six in all of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Navigation & Officers in Bridge Quarters 12 switches  
Forecastle 3 switches, cargo deck at midships Quarters 8 switches, midships circuit 7 Seven  
switches, Engineer room circuit 8 switches, wireless 1 switch in Captain's room & Wireless Room

If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes

If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits. Yes

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 25 per cent over the normal current

Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Yes If wire fuses are used

are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit *No wire fuses*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*

Total number of lights provided for ..... arranged in the following groups:—

A 300g lights each of 16 candle power requiring a total current of 19.2 Amperes

B Thirty lights each of 16 candle power requiring a total current of 14.4 Amperes

Thirty-two lights each of 16 candle power requiring a total current of 15.4 Amperes

D. Sixty-two lights each of 16 candle power requiring a total current of 29.8 Amperes

E Sixteen lights each of 16 candle power requiring a total current of 7.7 Amperes

One Mast head light with One lamps each of 16 candle power requiring a total current of 48 Amperes

Two Side light with One lamps each of 16 candle power requiring a total current of 96 Amperes.

Thirteen Cargo lights of 4 — 16 candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed. In wheel house

### DESCRIPTION OF CABLES.

Main cable carrying 90 Amperes, comprised of 37 wires, each 15 S.W.G. diameter, = 14.89 square inches total sectional area

Branch cables carrying 20 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .02227 square inches total sectional area

Branch cables carrying 10 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .01257 square inches total sectional area

Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, 0.03 square inches total sectional area

Cargo light cables carrying 15 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .01254 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

30% Pure Para Rubber, tape & banding  
with water proof compound

Joints in cables, how made, insulated, and protected. Spliced, soldered, taped with pure rubber  
+ friction tape

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances Yes Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage Yes

Are there any joints in or branches from the cable leading from dynamo to main switch board No

How are the cables led through the ship, and how protected. In water-tight galvanized iron conduit  
Except in living quarters which are all in wood moulding



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes except in cargo space where holds are full of cargo*  
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *all wires in such places are in galvanised iron conduit*  
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Iron conduit*  
 What special protection has been provided for the cables near boiler casings *Iron conduit*  
 What special protection has been provided for the cables in engine room *Iron conduit*  
 How are cables carried through beams *Iron conduit* through bulkheads, &c. *Water-tight glands*  
 How are cables carried through decks *Water-tight glands*  
 Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*  
 If so, how are they protected *In iron conduit (no wires terminate in cargo spaces)*  
 Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *No*  
 If so, how are the lamp fittings and cable terminals specially protected *—*  
 Where are the main switches and fuses for these lights fitted *—*  
 If in the spaces, how are they specially protected *—*  
 Are any switches or fuses fitted in bunkers *No*  
 Cargo light cables, whether portable or permanently fixed *Portable* How fixed *From water-tight fittings on deck*  
 In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Double wire*  
 How are the returns from the lamps connected to the hull *None*  
 Are all the joints with the hull in accessible positions *None*  
 Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *Yes*, fixed switchboard *—*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas  
 Are any switches, fuses, or joints of cables fitted in the pump room or companion  
 How are the lamps specially protected in places liable to the accumulation of vapour or gas

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *2500* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

*W. Haser*

Electrical Engineers

Date *25<sup>th</sup> Sept 1918*

COMPASSES.

Distance between dynamo or electric motors and standard compass *150 feet +*  
 Distance between dynamo or electric motors and steering compass *150 feet +*

The nearest cables to the compasses are as follows:—

A cable carrying <i>20</i>	Amperes <i>20</i>	feet from standard compass <i>✓</i>	feet from steering compass <i>✓</i>
A cable carrying <i>15</i>	Amperes <i>12</i>	feet from standard compass <i>✓</i>	feet from steering compass <i>✓</i>
A cable carrying <i>0-4</i>	Amperes <i>fitted in compass</i>	feet from standard compass <i>fitted in compass</i>	feet from steering compass <i>fitted in compass</i>

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be *Nothing* degrees on *✓* course in the case of the standard compass and *—* degrees on *—* course in the case of the steering compass.

*W. Haser (Electrical Eng)*

Builder's Signature.

Date *25<sup>th</sup> Sept 1918*

GENERAL REMARKS.

*The Electric Light Installation is of Good Quality & Workmanship. Tested under Working Conditions and found Satisfactory. Eligible in my opinion to be noted in the Register. Both Electric Light 10-18.*

*It is submitted that this vessel is eligible for*

THE RECORD.

ELECTRIC LIGHT.

*JK 9/12/18*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 27 MAY. 1919

FRI. 9 JAN. 1920

FRI. OCT. 3 1919

TUE. 23 DEC. 1919

TUE. 13 JAN. 1920



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